

people cannot afford to draftproof their homes. The problem is compounded," he continues, "because low income householders spend proportionately more of their income on energy than higher income earners — about 9 per cent compared to 4.7 per cent."

Both Tovey and Draftstop project manager Don Jennings (who is also Manager of the Buildings and Inspections Program for the City of Toronto), however, feel that programs like Operation Draftstop can help solve the problem. They also help improve housing stock.

Similar programs can be established in any community with assistance from provincial or federal job training and employment programs, or from local fund raising projects. Two other Ontario communities — Brampton (Seniors Weatherization Assistance Program) and Sudbury (Home Heat Recovery Project) have also launched draftproofing programs with the same positive results.

Stopping the Drafts in Toronto: Operation Draftstop

With initial funding from the City of Toronto; the New Employment Expansion and Development Program (NEED); and the Canada/Ontario Employment Development Program (COED), the Operation Draftstop began in June 1983. Since then, about 900 homes have benefited from the service.

The idea for the program originated in 1982 with the launching of ECCO (Energy Conservation Community Outreach), a pilot project aimed at bringing the energy efficiency message to the community level. Informing homeowners about draftproofing was an integral part of the community outreach efforts of ECCO. The ECCO project was financed jointly by the City of Toronto and the Ontario Ministry of Energy.

The positive response to the draftproofing initiative caused ECCO staff to consider implementing a program to help low income homeowners draftproof their homes.

Operation Draftstop, which provides free labour and varying levels of assistance towards the cost of materials to low income homeowners, was designed by the City of Toronto Planning and Development Department and is administered by the Buildings and Inspections Department.

Under the program, a crew of trained workers installs various draftproofing measures in the homes of specific groups of low income City of Toronto residents. Homeowners with an adjusted family income of no more than \$23,000 are eligible to receive the service free of charge. Recipients with an annual family income of between \$18,000 and \$23,000 are responsible for all material costs; recipients with an annual income of between \$13,000 and \$18,000 pay half the material costs and recipients earning less than \$13,000 receive both labour and materials free of charge.

Before the draftproofing work begins, a program officer from the Inspections Division of the City of Toronto Buildings and Inspections Department, interviews prospective recipients to determine eligibility. Eligibility forms are forwarded to the Draftstop supervisor who completes the home inspection and lists work which needs to be done.

On the day the service is delivered, the supervisor or an assistant meets the crew on site and explains the work plan. In most cases, the three-man Draftstop crew completes the draftproofing work in one day. A typical retrofit includes caulking and weatherstripping all outside doors and windows; caulking interior door frames; installing foam gaskets behind electrical outlets and switches; repairing broken or missing panes of glass temporarily with polyester window kits; caulking basements, baseboards and edges of fireplaces; and sealing any penetrations through the foundation wall where air leakage may occur.



Draftproofing retrofits include sealing penetrations through a home's foundation wall.



Operation Draftstop worker installs a bumper on a door's threshold.

The Operation Draftstop experience demonstrates the importance of resources, publicity and a quality product. Jennings points out that funds for the first (1983-84) phase were provided by federal and provincial government job creation programs (\$175,000) and the City of Toronto (\$45,000). The budget covered salaries for nine full time staff, office rent, insurance, materials, car rental, and general administrative costs.

Unfortunately, although 300 homes were still on the Draftstop waiting list at the end of 1984, the project was postponed because the funding programs ended. Operation Draftstop got a new lease on life, though, in 1985. During this second phase, salaries for workers were paid through Employment and Immigration Canada's Enhanced Benefit Unemployment Insurance Program (Section 38) and materials and other costs were provided by the City of Toronto. With a total operating budget of \$180,000, Operation Draftstop employed 11 people as of July 1985. Jennings attributes the success of the project to the fact that a lot of people in Toronto knew about the service. The initial publicity generated by ECCO and promotional efforts of the Draftstop team were highly effective. Operation Draftstop first produced a simple low cost flyer ("The Buck Stops Here") explaining the project and the eligibility criteria. The flyer was distributed to a target group of community organizations that served low income, handicapped and senior residents. The flyer was also distributed through the Ontario Property Tax Rebate literature.

Advertisements were placed in several Toronto community newspapers, and free publicity was generated through press releases, press conferences, and participation in local radio and television "talk" shows.

"There's still no better publicity than word of mouth, though" adds Jennings. "And that's why it's so necessary for your staff to do top



A typical draftproofing retrofit includes installing foam gaskets behind the covers of electrical outlets.

notch work and also to have a good rapport with homeowners." Draftstop crew members are trained by a qualified project leader (with an extensive background in energy conservation work) for five days of hands-on experience supplemented by instruction on air and moisture movement.

The first phase target of 350 homes was exceeded by 125, for a total of 475 homes and at the end of the year, more than 300 people were on the waiting list. By February 1986, an additional 425 Toronto homes and 50 homes belonging to the City of Toronto Non-Profit Housing Corporation had been draftproofed.

"A project like this really is an all-round winner," concludes Jennings. "The project recipients end up with a warmer, more comfortable house and lower annual heating bills, the crew are provided with jobs that involve learning new skills, and even local suppliers [of retrofit materials] benefit."



Operation Draftstop worker applies caulking to baseboards.



A draftproofing worker installs weatherstripping on a window.

Swapping Cold Drafts in the Region of Peel

SWAP (Seniors Weatherization Assistance Program), established in 1983, is just one of several community energy conservation services offered by the Urban Energy Centre (UEC) in Brampton. The UEC is funded by the Regional Municipality of Peel, the Cities of Brampton and Mississauga and Sheridan College. Financial assistance has also been provided by the Ontario Ministry of Energy and various local fund raising events.

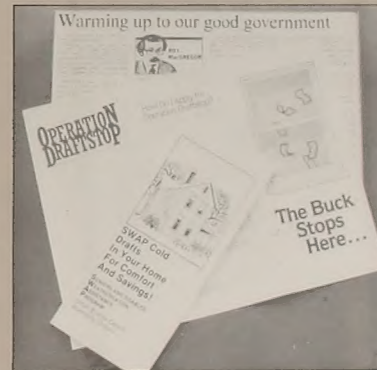
Similar to Operation Draftstop, SWAP originated as a natural extension of UEC's ongoing efforts to encourage local residents to take action on energy conservation. In this case, however, the program is aimed at draftproofing homes owned or occupied by senior citizens and disabled residents of the Region of Peel (including Brampton and Mississauga). SWAP provides a free energy audit and free labour for installation of weatherization products. The work involves weatherstripping and sealing around doors, windows, basement walls, baseboards and wall outlets.

Materials, available through the UEC office at cost, are paid for by the homeowner. Most households require between \$50 and \$60 for materials.

Although the SWAP program operates on a much smaller scale than its Toronto counterpart, U.E.C. coordinator Robert Fine is pleased with the results. "Since the project started in the summer of 1983, we've weatherized two housing cooperatives and more than 30 single family homes. And the recipients have been very positive in their response."

Fine explains that limited funding and manpower have restricted the scale of the project. Although some funding has been provided by job creation programs in the past (1984), since then, the program has had to rely primarily on funds from the UEC. Limited funding has resulted in most of the work being done by part-time workers. At the time of writing, two part-time workers are involved in the program.

Publicity has included placing SWAP advertisements in local newspapers; producing a flyer (SWAP Cold Drafts in Your Home) which is distributed through the UEC's outreach office in Brampton, the UEC Mobile Unit, local Real Estate offices and senior citizen's organizations; and showing two draftproofing programs on local cable T.V.



Publicity is a key ingredient in a successful draftproofing program.

"This past fall, we started visiting senior citizens' clubs and we distributed literature at a local energy conservation fair (Enerfest). During a three week period we received nine requests for the service. Obviously, public relations is the key," says Fine.

Robert Fine emphasizes that, in Brampton, volunteer support is just as important as financial support. In fact, Brampton Hydro supplies an energy auditor, free of charge, to conduct the initial energy audit of the homes. Energy experts from Brampton Hydro, along with volunteers from local contracting companies have also participated in the SWAP training program — which consists of an intensive five day course of classroom and hands-on instruction for the SWAP workers.

Recovering Home Heat in Sudbury

The second phase of Sudbury's Home Heat Recovery Project, which offers draftproofing services and materials free of charge to all senior and handicapped homeowners in the municipality, was launched in June 1985. Materials, equipment and salaries for supervisors were funded through the Community Economic Transformation Agreement (a provincial program) and wages for the project workers were paid by a grant from the Ontario Youth Corps (a program administered by the Ontario Ministry of Skills Development). Total funding amounted to \$260,000. A similar program, funded by NEED/COED (a joint provincial-federal program) was conducted in the Sudbury region between June 1983 and April 1984.

Bernie Fransen, Director of Building Controls for the Region and project co-ordinator says the project was developed to fill in the gaps of existing building improvement programs. While the City of Sudbury has a mandate to improve the quality of the housing stock, they weren't reaching many elderly homeowners. A direct draftproofing program seemed like an ideal way to solve the problem.

In addition to improving the quality and comfort level of the homes of seniors and handicapped individuals, the Sudbury draftproofing service was also designed to reduce heating bills of recipients and provide jobs for young unemployed workers. During the first phase, 300 homes were draftproofed and by the fall of 1985, an additional 400 homes received the service. Fransen also thinks the program helped a lot of young unemployed people. He comments, "Sudbury was hit hard by the recent economic recession and unemployment is a serious problem. Our program provides much needed jobs and, even more significantly, teaches the workers some useful skills and a positive attitude."

Twenty-one workers between 15 and 24 years of age were hired during the first phase of the project along with five supervisors, and 15 workers and five supervisors were hired during the second phase.

Potential recipients of the program were contacted through a list of senior citizen homeowners in the area available from the municipality, and through local organizations serving handicapped people. A flyer was sent out to appropriate households and organizations, including churches, senior citizen's clubs and Canadian Legions. In addition, advertisements were placed in local newspapers.

The project manager and an energy auditor visit the homes of qualified applicants and list the work that needs to be done. Once a homeowner agrees, the manager sets up a time for the draftproofing service.

"We stress a thorough training program" says Fransen, "because the quality of the work is essential to the project's success." All employees receive safety instruction from a safety expert from the Regional Municipality of Sudbury. Sudbury Hydro employees then provide in-depth instruction to the project manager and the supervisors. Each supervisor, in turn, trains the workers for at least 30 hours of theoretical and hands-on instruction. Supervisors remain on-site with the workers.

Fransen sums up the project by commenting, "The program recipients, the workers, the community as a whole, gained a positive attitude about people working together to help each other. Of course, our draftproofing programs have also improved the quality of the housing stock, provided jobs for unemployed workers, and assisted a needy segment of our society."

Excerpts from Letters Written by Program Recipients:

Sudbury — Home Heat Recovery Project

"This letter is to acknowledge my appreciation for the work you and your assistants did for me this summer. . . . Thanks. . . for the work you did on my steps, railings, weatherstripping, caulking around windows and doors, new panes of glass and cement repair. Besides labour and materials. . . I was greatly appreciative of the respect and co-operation shown by all the workers."

"We used your heat recovery project and must say we were very pleased and satisfied with the results. We thank you for this assistance and hope you are able to continue. . . to help pensioners and also the young people who need work."

"We have been very lucky as "seniors" to have had the privilege of being looked after by the Home Heat Recovery Project. We had a great work crew that did a perfect job of repairs to this old house."

"Recently I've had repairs done at my home. . . under the Home Heat Recovery Project. I am very pleased with the quality of the work. The teenagers responsible should be highly commended for their diligence and competence."

Letters from Recipients of Operation Draftstop

This is to thank you for the very thorough way in which your staff carried out their work. They are most courteous, neat and meticulous. . . We are delighted with the result."

"A short note to thank you and your crew for my now much warmer home. We can really feel the difference. . . Your crew were very polite. . . and hard workers. This is an old house and had ever so many draughts."

"My most sincere thanks. . . to Operation Draftstop for the excellent work done on my house. I have noticed a marked difference in the warmth and comfort. . . and have found my thermostat setting need be only between 60 and 65 degrees F to maintain it, so I anticipate lower oil consumption as a result. It is a great boon to us to have this need recognized and met. . . and a credit to the federal and provincial governments [in joining] the city in carrying out the program. Thank you."

Worker's Summary for the Seniors Weatherization Assistance Program

"Mrs. Drivers complained of drafts in her kitchen and upon inspection it was found that most of this was originating from the basement sillplate, a milkbox and a hole around the kitchen drainpipe. The sillplate, milkbox and all holes were sealed or foamed."

"Due to the low crawl space and large area of sillplate, the basement took most of the time required to weatherize this house."

"Mrs. Drivers seemed pleased with the work."

For further information contact:

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Municipal Draftproofing Projects

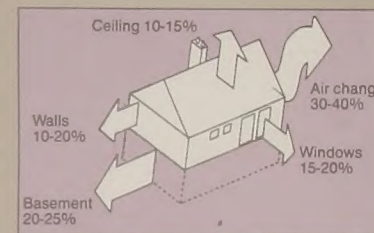


Three-man Operation Draftstop crew draftproof the home of a low-income Toronto resident.

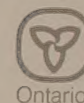
Cutting Costs and Creating Jobs

David Tovey, author of a report on Toronto's Operation Draftstop asks, "What could be more rewarding than delivering a service that assists a needy section of society, provides people with employment and new job skills, and saves energy?" That's what Operation Draftstop, a successful community-based service that employs trained workers to draftproof the homes of low and fixed income people, is all about.

Uncontrolled air leakage is the single most important cause of heat loss in homes, and for most older homes it accounts for up to 30 per cent of total heat loss. Draftproofing, which is primarily caulking and weatherstripping the gaps where air can leak in and out can reduce space heating costs by up to 10 per cent. And because the materials seldom cost more than \$175, the payback is usually one year or less. "Unfortunately," says Tovey, "for financial or physical reasons some



Uncontrolled air leakage can account for up to 30 per cent of total heat loss in an older home.



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